

AMENDMENTS TO THE CLAIMS

A complete listing of the claims is provided below. This listing of claims will replace all prior versions and listings of claims in the application:

1-39 (Canceled)

40. (Currently Amended) An ultrasonic blade that cuts composite material, comprising:

a blade body defined about a body axis extending between a first side and a second side of the blade body;

a first surface having a first curve, the first surface extending continuously from the first side to the second side of the blade body;

a second surface having a second curve, the second surface extending continuously from the first side to the second side of the blade body; and

a cutting edge on the blade body defined by the intersection of the first surface and the second surface comprising a first straight portion connected to a second straight portion via a curved portion, wherein the first and second straight portions are angled with respect to each other and with respect to the body axis, wherein a profile of the cutting edge is substantially smooth and substantially facet free.

41. (Previously presented) The ultrasonic blade according to claim 40, wherein the cutting edge is a substantially continuous profile spanning a width of the blade body.

42. (Previously presented) The ultrasonic blade according to claim 40, wherein the first straight portion and second straight portion are angled back towards the blade body at about 30° relative to a line perpendicular from the body axis.

43. (Previously presented) The ultrasonic blade according to claim 40, wherein the curved portion is defined by a radius of about 0.04 inches.

44. **(Previously presented)** The ultrasonic blade according to claim 40, wherein the blade body is comprised of a metal.
45. **(Previously presented)** The ultrasonic blade according to claim 44, wherein the blade body is comprised of a high speed steel.
46. **(Previously presented)** The ultrasonic blade according to claim 44, wherein the blade body is comprised of a carbide steel.
47. **(Previously presented)** The ultrasonic blade according to claim 40, wherein the first surface is curved about the first surface axis with a radius of about 0.171 inches.
48. **(Previously presented)** The ultrasonic blade according to claim 40, wherein the second surface is curved about the second surface axis with a radius of about 0.171 inches.
49. **(Currently Amended)** An ultrasonic blade for cutting a composite prepreg, the ultrasonic blade comprising:
- a blade body defined about a body axis extending between a first side and a second side of the blade body;
 - a first surface having a first curve, the first surface extending continuously from the first side to the second side of the blade body;
 - a second surface having a second curve, the second surface extending continuously from the first side to the second side of the blade body; and
 - a cutting edge on the blade body defined by the intersection of the first surface and the second surface, the cutting edge comprising a first straight portion connected to a second straight portion via a curved portion, the first and second straight portions are angled with respect to each other and with respect to the body axis and the curved portion crosses the body axis at a relatively distal point of the blade body, wherein the ultrasonic blade is configured to receive ultrasonic vibrational energy to cut the composite prepreg, and wherein a profile of the cutting edge is substantially smooth and substantially facet free.

50. **(Previously presented)** The ultrasonic blade according to claim 49, wherein the cutting edge is a substantially continuous profile spanning a width of the blade body.
51. **(Previously presented)** The ultrasonic blade according to claim 49, wherein the first straight portion and second straight portion are angled back towards the blade body at about 30° relative to a line perpendicular from the body axis.
52. **(Previously presented)** The ultrasonic blade according to claim 49, wherein the body axis, first surface axis and second surface axis substantially converge at a point.
53. **(Previously presented)** The ultrasonic blade according to claim 49, wherein the curved portion is defined by a radius of about 0.04 inches.
54. **(Previously presented)** The ultrasonic blade according to claim 49, wherein the blade body is comprised of a metal.
55. **(Previously presented)** The ultrasonic blade according to claim 54, wherein the blade body is comprised of a high speed steel.
56. **(Previously presented)** The ultrasonic blade according to claim 54, wherein the blade body is comprised of a carbide steel.
57. **(Previously presented)** The ultrasonic blade according to claim 49, wherein the first surface is curved about the first surface axis with a radius of about 0.171 inches and the second surface is curved about the second surface axis with a radius of about 0.171 inches.
58. **(Currently Amended)** An ultrasonic blade for cutting a titanium graphite composite, the ultrasonic blade comprising:
a blade body defined about a body axis extending between a first side and a second side of said blade body;

a first surface having a first curve, the first surface extending continuously from the first side to the second side of the blade body;

a second surface having a second curve, the second surface extending continuously from the first side to the second side of the blade body; and

a cutting edge on the blade body defined by the intersection of the first surface and the second surface, the cutting edge comprising a first straight portion connected to a second straight portion via a curved portion, the first and second straight portions are angled with respect to each other and with respect to the body axis and the curved portion crosses the body axis at a relatively distal point of the blade body, wherein the ultrasonic blade is configured to receive ultrasonic vibrational energy to cut the titanium graphite composite, and wherein a profile of the cutting edge is substantially smooth and substantially facet free.

59. **(Previously presented)** The ultrasonic blade according to claim 48, wherein the cutting edge is a substantially continuous profile spanning a width of the blade body.

60. **(Previously presented)** The ultrasonic blade according to claim 58, wherein the first straight portion and second straight portion are angled back towards the blade body at about 30° relative to a line perpendicular from the body axis.

61. **(Previously presented)** The ultrasonic blade according to claim 58, wherein the body axis, first surface axis and second surface axis substantially converge at a point.

62. **(Previously presented)** The ultrasonic blade according to claim 58, wherein the curved portion is defined by a radius of about 0.04 inches.

63. **(Previously presented)** The ultrasonic blade according to claim 58, wherein the first surface is curved about the first surface axis with a radius of about 0.171 inches and the second surface is curved about the second surface axis with a radius of about 0.171 inches.

64. **(Currently Amended)** An ultrasonic blade comprising:

a body having a longitudinally extending axis and a first side and a second side; and
a first cambered surface and a second cambered surface on said body, each said cambered surface extending from said first side to said second side,

said first and second cambered surfaces defining a cutting edge on said body having a first substantially straight blade portion on the first side of said body connected to a second substantially straight blade portion on the second side of said body by a curved blade portion to form a substantially continuous blade profile, wherein said first and second straight portions are angled with respect to each other and with respect to the body axis, and wherein a profile of the cutting edge is substantially smooth and substantially facet free.